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1. REPORT DATE (DD-MM-YYYY) 13-02-2006		2. REPORT TYPE FINAL		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Riverine Force-A Vital Navy Capability for the Joint Force				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Michael C. McCurry, Major, USA Paper Advisor (if Any): Professor Theodore Gatchel				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Joint Military Operations Department Naval War College 686 Cushing Road Newport, RI 02841-1207				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A: Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES A paper submitted to the faculty of the NWC in partial satisfaction of the requirements of the JMO Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC, or the Departments of the Army or Navy.					
14. ABSTRACT Rivers and other restricted waters present a crucial capability gap for the United States military in prosecuting the Global War on Terror (GWOT). Throughout history, the U.S. Navy has used riverine forces successfully. The U.S. Navy should develop and maintain a robust riverine capability for the combatant commander's use. Not only would a riverine force provide a vital capability to the warfighting headquarters, it would increase the relevancy of the U.S. Navy in the GWOT, and prepare the United States military to deal with further asymmetric threats along the world's inland waterways. The Navy is the correct service to provide this operational capability because the tactical tasks to be performed by this force are essentially naval in character, it is the least employed military service in the GWOT, and the Navy's history, tradition, and culture make it the best-suited service to provide these forces. The joint community must also actively support the creation and implementation of this force to enable the U.S. military to dominate this vital terrain.					
15. SUBJECT TERMS Riverine, Civil War, Vietnam, Mesopotamia, Iraq					
16. SECURITY CLASSIFICATION OF:		17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON	
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED			c. THIS PAGE UNCLASSIFIED	27
				19b. TELEPHONE NUMBER (include area code) 401-841-3556	

**NAVAL WAR COLLEGE
Newport, R.I.**

Riverine Force-A Vital Navy Capability for the Joint Force Commander

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal view and are not necessarily endorsed by the Naval War College, the Department of the Navy, or the Department of the Army.

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13 February 2006

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Abstract

Rivers and other restricted waters present a crucial capability gap for the United States military in prosecuting the Global War on Terror (GWOT). Throughout history, the U.S. Navy has used riverine forces successfully. The U.S. Navy should develop and maintain a robust riverine capability for the combatant commander's use. Not only would a riverine force provide a vital capability to the warfighting headquarters, it would increase the relevancy of the U.S. Navy in the GWOT, and prepare the United States military to deal with further asymmetric threats along the world's inland waterways. The Navy is the correct service to provide this operational capability because the tactical tasks to be performed by this force are essentially naval in character, it is the least employed military service in the GWOT, and the Navy's history, tradition, and culture make it the best-suited service to provide these forces. The joint community must also actively support the creation and implementation of this force to enable the U.S. military to dominate this vital terrain.

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INTRODUCTION

“Sabre 8, this is Eagle 6, Spot Report, Over...” “Eagle 6, this is Sabre 8, over.” “Sabre 8, Eagle 6, two male personnel in civilian dress, in a small boat just launched from grid LD12345678, currently moving South across the Tigris toward Balad, time 1200 hours local, Over.” Eagle 6, Sabre 8, roger, are any weapons visible? Over.” “Sabre 8, Eagle 6, Negative, the boat is piled high with crops, unable to confirm weapons, request guidance, Over.” “Eagle 6, Sabre 8, do not engage, continue reconnaissance, Over.” “Sabre 8, Eagle 6, acknowledged, Over.” “Sabre 8, Out!”

In this fictitious exchange, Sabre 8 is the Deputy Commander of a U.S. Cavalry Squadron, and Eagle 6 is a subordinate Air Cavalry Troop Commander. Eagle 6 is reporting boat traffic on the Tigris River of Iraq because recent intelligence reports indicated insurgent traffic on the river. While Eagle 6 is able to detect a boat on the river easily, he cannot engage unless the boat displays hostile intent or act, and he has no capability to determine if the craft may have an additional cargo of weapons underneath the crops. This radio exchange is fictitious; however I personally experienced situations like this numerous times each week in Iraq. Currently, a trained riverine capability exists in only the United States Special Operations Command’s (USSOCOM) Special Boat Team 22.¹

Rivers and other restricted waters present a crucial capability gap for the United States military in prosecuting the Global War on Terror (GWOT). A brown water, or riverine force is a vital capability for our regional combatant commanders (RCCs) today. The American military is engaged in fighting insurgency in Iraq and Afghanistan, the Quadrennial Defense Review is underway, and we currently have no near-peer competitor for our formidable blue water fleet. Thus, the United States Navy (USN) is examining ways

¹ Lieutenant Colonel Patrick Donahoe, United States Army, and Commander Laurence McCabe, United States Navy, “Controlling the Rivers,” *Proceedings* (January 2006): 29. During *Operation Iraqi Freedom II*, the United States Marine Corps also maintained a riverine capability in the Small Craft Company. This Company was inactivated 6 June 2005 at Camp LeJeune, North Carolina. See Marine Corps News on the internet at website www.marines.mil/marinelink/mcn2000.nsf/lookupstoryref/20056141373.

to increase its relevance to the regional combatant commanders in the GWOT and future conflicts. Developing and maintaining a robust riverine capability is one way to do this.

As long as the United States military retains its vast technological overmatch, it should expect to be challenged asymmetrically. In order to be successful against an asymmetric enemy, the military must control all possible lines of communication in an area of operations, including the inland waterways. Additionally, when striving to gain the support of the local populace, it is critically important that the military establish this control, without having to kill or sink everything traveling on the rivers. A riverine force that can operate continuously on the water, and distinguish legitimate economic traffic from the insurgent weapons and foreign fighter supply chain is the answer.

The U.S. Navy should develop and maintain a robust riverine capability for the combatant commander's use. Not only would a riverine force provide a vital capability to the warfighting headquarters, it would increase the relevancy of the U.S. Navy in the GWOT, and prepare the United States military to deal with further asymmetric threats along the world's inland waterways. The Navy is the correct service to provide this operational capability because the tactical tasks to be performed by this force are essentially naval in character, it is the least employed military service in the GWOT, and the Navy's history, tradition, and culture make it the best-suited service to provide these forces.²

The purpose of this paper is to study the historical precedent for this force, examine the current operating environment in Iraq in light of existing limited riverine capabilities, and discuss future opportunities for riverine employment. Finally, this paper will make recommendations on riverine force capabilities, riverine doctrine, and areas that require further study.

² Donahoe and McCabe, "Controlling the Rivers", 27.

HISTORICAL BACKGROUND

The famous painting, *George Washington Crossing the Delaware* deftly portrays the durability of riverine operations as an operational concept endorsed by the United States military.³ From early in its first conflict the U.S. military has used small boats on inland waterways in pursuit of operational success. During times of crisis, the American military has repeatedly recognized the strategic and tactical value of rivers. At each of these points in history, the United States Navy has had to jump through proverbial hoops to develop a riverine capability after a crisis occurred. The primary historical focus of this paper will be on the Civil War, Vietnam, and the British Campaign in Mesopotamia.

Civil War

At the outset of the Civil War, neither side had a robust riverine capability. Both sides recognized the need and quickly appointed well-respected, nautically experienced men to design and build their respective fleets. For the Union, this was especially important because General Winfield Scott's "Anaconda plan," which Secretary of the Navy Gideon Welles put into action, called for the strangulation of the South by naval blockade, and seizure of the Ohio and Mississippi River valleys through joint riverine operations to split the Confederacy.⁴ Although there was no regional combatant commander, it is fair to call the splitting of the South along the Mississippi an operational objective. Led by such men as Welles, General John Fremont, Captain Andrew Foote, and shipbuilder James Eads, the pace of the Union riverine fleet buildup was extraordinary. Although the Confederacy had an equally capable Secretary of the Navy in Stephen Russell Mallory, the lack of resources and

³ Emanuel Gottlieb Leutze, *George Washington Crossing the Delaware*, oil on canvas, 1851, The Metropolitan Museum of Art, New York.

⁴ Jack D. Coombe, *Thunder Along The Mississippi: The River Battles that Split the Confederacy*, (New York: Sarpedon, 1996), 12.

industrial capacity doomed production, and it was never able to produce the number of vessels necessary to defeat the Union Navy. The Union was operationally successful in using this new capability to drive a wedge deep into the heart of the South, and eventually to split it down the Mississippi River.⁵

The ugly, flat ironclad gunboats of the Union riverine force, known as “Pook’s Turtles,” would provide the basis for constructing future riverine craft one hundred years later.⁶ In addition to their assault troop transport function, previously performed in other campaigns and wars, advances in using riverine craft as fire support platforms both against forts and in support of ground troops were immense. At the battle of Fort Henry, in February 1862, the bombardment of the fort by Union gunboats under the command of Commodore Foote, was so successful that the Rebel commander surrendered before the Union Army even arrived. Despite that victory, the gunboats were most successful when conducting joint operations. Later that month, at Fort Donelson, for example, gunboats preceded Brigadier General Ulysses S. Grant’s army force, and took heavy damage as they approached the fort’s batteries. The gunboats were forced to retire from the action, but Grant was successful in capturing the fort with ground forces in the coming days. Also, at the Battle of Shiloh, naval vessels provided extraordinary fire support after debarking Grant’s troops. Lieutenant William Gwin, Commander of the woodenclad gunboat *Tyler* repositioned his boat throughout the day to fire in support of the ground attack, earning commendation from General Grant himself.⁷

⁵ Ibid., 14, 19-21.

⁶ Ibid. Samuel Pook designed the boats with the armored “shell,” 21.

⁷ R. Blake Dunnivant, *Brown Water Warfare: The U.S. Navy in Riverine Warfare and the Emergence of Tactical Doctrine, 1775-1970*, (Gainesville, FL, University Press of Florida, 2003), 63-64.

As Union forces gained control of more water, river patrolling was initiated as a new tactic against Confederate guerillas. Records indicate that Rear Admiral David Dixon Porter, who had previously seen action on the rivers of Mexico, divided his area into patrol districts and ordered day and night, reconnaissance and interdiction patrols during the war. His instructions to the vessels and sailors conducting these patrols were perfectly written for combating insurgency as he wrote, “cultivate good feelings with the inhabitants, and allow no improprieties to be committed by officers or crew.”⁸

Another major contribution of riverine operations during the Civil War was experimentation with different command and control structures. Welles initially placed the Union Navy forces on the Mississippi under the control of the Army. This was consistent with historical precedence. Eventually however, the riverine forces operated under the command of the Navy Department. The western riverine forces, under the new command arrangement, were “to extend their services to army leaders upon their request, if this did not impede or infringe on previously issued navy orders.” The change was precipitated by differences about naval roles and logistics concerns.⁹ Despite the lack of unity of command, the Union Army and Navy cooperated magnificently, retaining unity of purpose. Conversely, Confederate performance was impaired by infighting between the Army and Navy, and the pressure on the Confederate Navy to match the Union’s far superior gunboat fleet was immense.¹⁰ Command and control of riverine forces would continue to be a thorny issue in future conflicts.

At Vicksburg, the culminating battle of the Mississippi campaign, joint riverine operations would again be pivotal to the Union’s success. Due to the strength of the

⁸ Ibid., 74 from General Order, No. 84, 20 August 1863, in *Official Records of the Navies*, Series I, 25:377.

⁹ Ibid., 60-61, from *Official Records of the Navies*, Series I, vols. 23-27.

¹⁰ Coombe, 231.

Confederate batteries on the bluffs overlooking the river, a direct amphibious assault on the city was untenable. Swamps and marshes north of the city prevented suitable landing areas on the eastern bank, except below the city. It was the daring run past the Confederate batteries by Porter's fleet that enabled Grant's forces to reach the east side of the city, and begin the siege. Porter's gunboats then poured fire onto the batteries and into the city and further demoralized the Confederate troops and local populace. On July 3, 1863, Grant negotiated the Confederate surrender to take effect the following day. This victory, shaped by the mighty Union riverine force, was an operational and strategic milestone. Had it occurred on any other date, the victory and the Navy's role in the Civil War would have received even greater recognition. Ironically, at the same time in a Pennsylvania field, near a town named Gettysburg another battle was being waged. President Lincoln clearly recognized the riverine Navy's role in the Union victory as he said:

Nor must Uncle Sam's web-feet be forgotten. At all the watery margins they have been present. Not only on the deep sea, the broad bay and the rapid river, but also up the narrow muddy bayou and wherever the ground was a little damp, they have been and made their tracks.¹¹

Vietnam

The US patrol encountered a heavy volume of fire from enemy forces at close range, occupying well-concealed positions along the riverbank. Maneuvering through this fire, the patrol confronted a numerically superior enemy force aboard two junks and eight sampans augmented by heavy machine gun fire from ashore. . . .in the course of his movement, he discovered an even larger concentration of enemy boats. Not waiting for the arrival of the armed helicopters, he displayed great initiative and boldly led the patrol through the intense enemy fire and damaged or destroyed fifty enemy sampans and seven junks.¹²

¹¹ Thomas J. Cutler, *Brown Water, Black Berets: Coastal and Riverine Warfare in Vietnam*, (Annapolis, MD, Naval Institute Press, 1988), 210.

¹² John Lehman, *On Seas of Glory*, (New York, The Free Press, 2001), 334. This citation for the Congressional Medal of Honor of Boatswain's Mate First Class James Elliott Williams, a PBR skipper in the Mekong Delta of

The trend of U.S. unpreparedness at the beginning of a conflict continued with Vietnam. Once again, the military did not have an organic riverine capability when one was needed, and the U.S. Navy was forced to jumpstart the program. Fortunately, the U.S. Navy was able to employ advisors with the Vietnamese Navy (VNN) while building a force. The advisory force accomplished two objectives for the U.S. Navy. It assisted the VNN with more educated and professional officers and noncommissioned officers, and it imbued our advisors with some greatly needed experience in riverine operations. The basis of the VNN forces accompanied by our advisors was the French *Dinassauts*, or river assault divisions.

In 1964, the Commander in Chief Pacific (CINCPAC) Admiral Felt commissioned the Vietnam Delta Infiltration Study Group to “observe, analyze, and provide recommendations pertaining to the improved control and prevention of infiltration of equipment, materials, and personnel into South Vietnam in support of military operations of the Communist Viet Cong.” Known as the Bucklew Report, the findings stated that infiltration via the rivers and canals in the Mekong Delta was worse than the infiltration from the sea, that a riverine capability would be required to control the infiltration, and that the VNN did not have the capacity to organize and operate this force on its own.¹³

The U.S. Navy increased the size of its advisory force and developed a riverine capability that would progress through three levels of major operations: MARKET TIME, GAME WARDEN, and SEALORDS. Each successive operation furthered the riverine and coastal capabilities of the U.S. Navy. MARKET TIME was an effort by Task Force 115 to “conduct surveillance, gunfire support, visit and search, and other operations” to combat

Vietnam in 1966, serves as a reminder of the bravery and heroism of the US Navy’s brown water force in past battles.

¹³ Bucklew Report Basic Conclusions, Naval Historical Center, 2-5.

Communist “infiltration from the sea.” Operation GAME WARDEN followed the success of MARKET TIME, and was assigned to Task Force 116, or the River Patrol Force. Their mission was “to assist the Government of South Vietnam in denying the enemy the use of the major rivers of the [Mekong] Delta and the Rung Sat zone.” Significantly, during this operation the Navy procured the River Patrol Boats (PBR) based on a civilian design, and acquired twenty-four UH-1B Iroquois helicopters from the Army. The new fiberglass, Jacuzzi jet powered boats vastly increased maneuverability, and the helicopters, nicknamed “Seawolves”, provided dedicated close air support for the light watercraft. SEALORDS, or the Southeast Asia Lake, Ocean, River Delta Strategy, was the much later (1968) barrier campaign “aimed at eliminating insurgent infiltration and pacifying the countryside.”¹⁴

During Operation GAME WARDEN the River Patrol Force had been successful in disrupting Viet Cong movement of supplies and personnel on the rivers and canals, but because no American ground troops were operating in the Mekong Delta (IV Corps Tactical Zone), the River Patrol Force had no means to control the riverbanks or clear inland. General William Westmoreland, Commander United States Military Assistance Command (MACV), wanted the ability to bolster the South Vietnamese Army’s (ARVN) efforts in the delta, but there was no force available to commit, and nowhere to stage them. Captain David F. Welsh, USN, the head of the Plans and Requirements Division of the MACV J-3 (Operations) spawned the idea of a mobile afloat force, a floating troop base made of converted Landing Ship Tanks (LSTs), and obtained the concurrence of COMNAVFORV, Rear Admiral Norvell Ward, who agreed ships were available. The concept was briefed as having a

¹⁴ LCDR Eugene F. Paluso, “Operation SEALORDS: A Study in the Effectiveness of the Allied Naval Campaign of Interdiction,” Thesis Marine Corps Command and Staff College, April 2001, 13-14 from Commander R.L. Schreadley, United States Navy, “The Naval War in Vietnam 1950-1970,” *Proceedings* Vol. 97, no.819, May 1971, 190-192. Dunnavent, 115-116,121.

reinforced brigade of ground troops, with a complementary Navy structure of two River Assault Groups (later Squadrons).¹⁵

The joint design of this force gave the operational commander (MACV) flexibility to conduct major riverine operations at the time and place of his choosing. The ground element of this force would have ideally been Marines. Their amphibious expertise and history of operating with the Navy made them perfectly suited for the mission, but they were already fully committed in the northernmost part of the country (I Corps Tactical Zone). The United States Army would instead reactivate the 9th Infantry Division of World War II fame, and the Second Brigade would operate as the ground force of the MRF. In addition to the combat power of an infantry brigade, each river assault squadron would have armored troop carriers (ATC), command and communication boats (CCB), monitors, assault support patrol boats (ASPB) and refuelers, modified from LCM-6s from World War II. See illustrations in Appendix A. The force later developed artillery and helicopter barges to enable rapid troop movement, command and control, medical evacuation, and fire support (105mm Howitzers). The 2d Brigade's parent unit, the 9th Infantry Division provided attack helicopter support for the ground troops.¹⁶

In a joint task force, or any multiservice operation, command and control is critical. Similar to the riverine forces of the Civil War, the MRF's chain of command was not clear. See diagram in Appendix A. Each service seems to think in retrospect that it commanded the force. In reality, it was a perfect example of cooperation and coordination between Captain Wade C. Wells, USN, and Colonel William B. Fulton, USA. Major General George G. O'Connor, Commanding General, 9th Infantry Division, had this to say about the command

¹⁵ Major General William B. Fulton, *Vietnam Studies: Riverine Operations 1966-1969*, (Washington, DC: Department of the Army, 1973), 30-31.

¹⁶ Ibid.

and control relationship, “Harmony prevails as neither element controls, and no joint headquarters has been superimposed. They have functioned well together because they wanted to.”¹⁷

The Mobile Riverine Force’s massive firepower and maneuver capability, self-contained on a mobile base, gave MACV the ability to relocate the unit to an area under its own power, and immediately seize the initiative. MACV would use that flexibility to its advantage during the Tet Offensive of 1968, as the MRF base relocated a distance of twenty-five miles, conducted sustained operations for eight straight days, and saved the major cities of the Mekong Delta. If the enemy offensive had happened one year prior, the MRF would not have been there to repulse it.¹⁸ The original Mobile Afloat Force Concept illuminated this vast capability as it assigned the tasks for the force:

Secure U.S. base areas and lines of communication required for U.S. operations, conduct offensive operations against Viet Cong forces and base areas that posed a threat both to the national and to the IV Corps Tactical Zone priority areas for rural construction in co-ordination with Republic of Vietnam armed forces and other U.S. forces; isolate heavily populated areas and key food producing areas from Viet Cong base areas; interdict Viet Cong supply routes; and in co-ordination with the Vietnam armed forces provide reserve and reaction forces in the IV Corps Tactical Zone.¹⁹

Clearly, the MRF was an invaluable capability for the operational commander.

Mesopotamia

In the Middle East, there is the British example of riverine warfare on their march through Mesopotamia in World War I. The parallel of fighting northward from the Persian Gulf, defeating a defending force, and subsequently taking on civil-military operations is eerily familiar. The British invasion was kicked off in 1914 by the Indian Expeditionary

¹⁷ Cutler, 238.

¹⁸ Cutler, 262-263.

¹⁹ Fulton, 32.

Force entering the Shatt al-Arab. They fought a combined arms operation against the Turks with their riverine forces supporting the ground component. They quickly realized the value of a riverine force on the biblical Tigris and Euphrates rivers. In fact, a British Army officer argued for more light craft saying, “There can be no doubt that river transport will continue to be the governing factor in any future operations...[without them] we cannot make the most effective use of our troops.”²⁰ The extended British military operations stretched the length of the Tigris, from the Persian Gulf to Baghdad, and eventually all the way to Mosul. Operations along the Euphrates included familiar places such as Fallujah (Feluja) and Ramadi (Ramadie). British riverboats supported operations along the major rivers and the cooperation between the land and river forces was heralded as a success.

The missions and roles of the naval forces in this campaign mirrored those of U.S. forces in the two conflicts discussed previously. The many missions included, “sometimes patrolling the river or convoying river craft, or exploring new waters, often taking part in combined operations, with detached military forces, or co-operating in battles or bombardments of enemy positions with the military.”²¹ Although this is a limited example, it shows that riverine forces have been successful on the rivers of Iraq before.

²⁰ Sir George Buchanan, *The Tragedy of Mesopotamia*, (Edinburgh and London, William Blackwood and Sons, Ltd., 1938), 20.

²¹ Vice Admiral Wilfrid Nunn, *Tigris Gunboats: A Narrative of the Royal Navy’s Co-operation with the Military Forces in Mesopotamia from the Beginning of the War to the Capture of Baghdad (1914-17)*, (Plymouth, The Mayflower Press, 1932), 280.

CURRENT REQUIREMENTS

Media reports from Iraq describe foreign fighters and supplies infiltrating down the Euphrates River Valley from Syria towards Baghdad. In addition, like the example in the introduction, there are numerous reports of insurgent movement on the rivers. Since most of the cities and villages in Iraq are located along either the Tigris or the Euphrates Rivers, it is not hard to see the operational utility of a riverine force to perform the missions, roles, and tactics previously demonstrated by the U.S. and British navies.

The Department of Defense (DoD) dictionary defines riverine operations as:

Operations conducted by forces organized to cope with and exploit the unique characteristics of a riverine area, to locate and destroy hostile forces, and/or to achieve or maintain control of the riverine area. Joint riverine operations combine land, naval, and air operations, as appropriate, and are suited to the nature of the specific riverine area in which operations are to be conducted.²²

The U.S. military is engaged with a determined insurgency, and the overwhelming evidence is that local insurgents are being supported from both inside and outside the country. The U.S. Army and USMC routinely set up traffic control points (TCPs) to interdict insurgent movement on the roads and highways, but have no capability for routine interdiction of traffic on the water. Marines and Soldiers continue to adapt and use ad hoc measures such as the Army's combat engineer bridging boats to patrol the rivers.²³ The Army's First Infantry Division even tried to procure riverine craft to employ in its sector north of Baghdad during Operation Iraqi Freedom II.²⁴ Although the ingenuity is commendable, tactical commanders should not have to invent ways to provide this vital capability. Without the capability to stop and search boats however, the rivers are wide open.

²² U.S. Department of Defense. The Joint Staff, Joint Pub. 1-02, *Department of Defense Dictionary of Military and Associated Terms*, (12 Apr 2001 as amended through 9 Jun 04), 459.

²³ Donahoe and McCabe, 27.

²⁴ Email Interview with Major General (ret.) John R.S. Batiste, Commanding General of the 1st Infantry Division during Operation Iraqi Freedom II, 30 Jan 06.

In counterinsurgency, control of these vital waterways is imperative. It allows the ability to isolate cells from the support structure, and track logistics patterns. All of that facilitates more precise targeting, which destroys insurgent cells without disrupting everyday life for the populace.

In major operations, such as retaking the riverside cities of Samarra and Fallujah, a waterborne force is necessary to establish a complete cordon around the perimeter of the city. In October 2004, when the 1st Infantry Division retook the city of Samarra from the insurgents, this capability was lacking. Time and time again I received reports of the type depicted in the introduction, describing persons fleeing the city in boats. Without the capability to stop and search these boats, we cannot know for certain their cargo or mission, but I am certain that some insurgents escaped via the Tigris. This circumstance was also present months before, in April 2004, when U.S. forces attempted to retake Fallujah. After the operation was aborted, “several different intelligence summaries indicated that the enemy forces were using the river as a primary avenue of reinforcement, resupply, and egress.”²⁵ In November 2004, during the successful second attempt to retake Fallujah, the USMC Small Craft Company was utilized to cut the river as an avenue of escape.²⁶ The USMC has since deactivated the Small Craft Company, although some of the boats remain in Iraq. This leaves only a small special operations riverine capability (Special Boat Team-22) remaining in the entire Department of Defense.²⁷

²⁵ Capt. Paul D. Stubbs, USMC, “No Man’s Water,” *Marine Corps Gazette*, (February 2005), Vol. 89, Issue 2, 20-21.

²⁶ Joseph Giordono, “Beached Marines Ready to Return to the Water,” *Stars and Stripes:Mideast Edition*, (January 10, 2005).

²⁷ SBT-22 is an elite, highly trained unit that provides a niche capability to the operational Joint Force Commander.

Clearly senior military leaders are concerned about the capability gap. Lieutenant General James M. Mattis, Commanding General of the Marine Corps Combat Development Command, said recently that, “The enemy in Iraq has exploited the lack of U.S. dominance in inland-waterway warfare.” Additionally, last year U.S. Central Command (CENTCOM) Commander, Army General John Abizaid, said he needed a riverine capability to patrol the Tigris and Euphrates when the Marines were gone.²⁸ It seems, “By conceding the water as a line of communications, resupply, reinforcement, and egress, we are allowing the enemy free and uncontested movement within the battlespace we claim as ours.”²⁹

²⁸ Grace Jean, “Navy Riverine Force to Report for Iraq Duty in 2007,” *National Defense Magazine*, (January 2006), on the web at www.nationaldefensemagazine.org/issues/2006/jan/navy.htm.

²⁹ Stubbs, 21.

FUTURE EMPLOYMENT

A riverine force directed by the Chief of Naval Operations (CNO) is scheduled to deploy to Iraq no later than 2007.³⁰ This new force will replace the capability formerly maintained by the USMC. The increased interest from leaders outside the Navy and the CNO's directive will propel the riverine concept in the short term. The real test of the US military's dedication to the concept will be in the development of the future force. The updating of past service doctrine, and development of coherent command and control structures will indicate that DoD has the desire to maintain this capability.

There is no lack of rivers and restricted waterways in the world's hotspots. In Nigeria for example, there are over 5,580 miles of navigable waterways including the turbulent and oil-rich Niger Delta.³¹ According to Marine Corps Major General Gordon Nash, Director of the Navy's Expeditionary Warfare Division, the chief of operations for the Peruvian Navy informed Admiral Vern Clark (then CNO) last year that he had found 14,000 miles of navigable river mostly between Peru and Colombia.³² As the U.S. continues to pursue the GWOT and counter-drug operations, there will be ample opportunity to employ a riverine force.

Although force structure is beyond the scope of this paper, a discussion of operational tasks is not. The CJCS Universal Joint Task List's (UJTL) task OP 1 titled "Conduct Operational Movement and Maneuver" has a subtask of OP 1.5 "Conduct Operationally Significant Areas" that is further subdivided including OP 1.5.6 "Control Operationally Significant Riverine Areas in the Joint Operations Area."³³ Since the USMC has already

³⁰ Jean.

³¹ Donahoe and McCabe, 28.

³² Jean.

³³ Department of Defense, "The Unified Joint Task List," The Joint Staff , August 2005, D-33.

divested itself of its riverine unit, and the Navy units are still standing up, where does the capability exist for the Joint Force Commander to conduct this operational task? Currently this task can only be performed in a very small area due to SBT-22 being the only force to employ.

With regard to what sort of Navy force should be developed, it should have air, ground, and maritime capabilities. Historical experience from the Mobile Riverine Force in Vietnam shows, and the DoD definition of riverine operations requires, the integration of all three components to truly control the riverine area (IAW UJTL OP 1.5.6). Perhaps some of these roles may be filled by the other services, but that should be clearly delineated when updating the service and joint doctrine.

RECOMMENDATIONS

The CNO, Admiral Mullen, realizes that the Navy is the right service at the right time to add riverine capability to the Combatant Commander's kit bag. In light of that, the following recommendations are made:

1. The U.S. Navy should develop and maintain a robust riverine force.
2. The force should offer the following capabilities to the Joint Force or Combatant Commander: patrolling, surveillance, waterway interdiction, board and search, troop assault, fire support. The Navy should examine the MRF of Vietnam an example of Joint basing afloat in light of the current Sea-Basing concept.
3. The U.S. Navy should continue updating its riverine service doctrine (NWP 3-06 series) relooking the old NWP 21A/B, USMC pub FMFM 8-4, and lessons learned from Small Craft Company operations in Iraq as a base.
4. The Joint Staff J-7 should validate the requirement for Joint Riverine Doctrine, initiate program directives, and establish the U.S. Navy as lead agent.
5. Joint Forces Command should develop command and control models in coordination with the services. Although command and control of these forces has historically been problematic, it must be solved in order to employ these forces effectively. The speed of operations and lethality of fires in the contemporary operating environment, especially where rivers are frequently used as unit boundaries, create an increased risk of fratricide if the chain of command and clearance of fires procedures are not clear. Also, the transition of riverine forces from JFMCC to JFLCC control, much as the USMC operates inland, should be addressed.

6. The U.S. Navy should establish a riverine training school. Recommend that Marines who served with SCC in Iraq, and Navy SBT-22 personnel be recruited as initial cadre to preserve the current knowledge base. Further recommend that the school be collocated with SBT-22 in Mississippi to leverage manpower, experience, and knowledge.

7. The U.S. Navy should inherit the former SCCs boats and equipment, and begin research and development for other riverine craft. Research should be capability based with considerable weight given to historical roles (monitors, assault boats, patrol boats, CCBs).

8. The other services (Army, USMC and USAF) should support a riverine force through the functional capabilities boards and the Joint Review and Oversight Council (JROC) process.

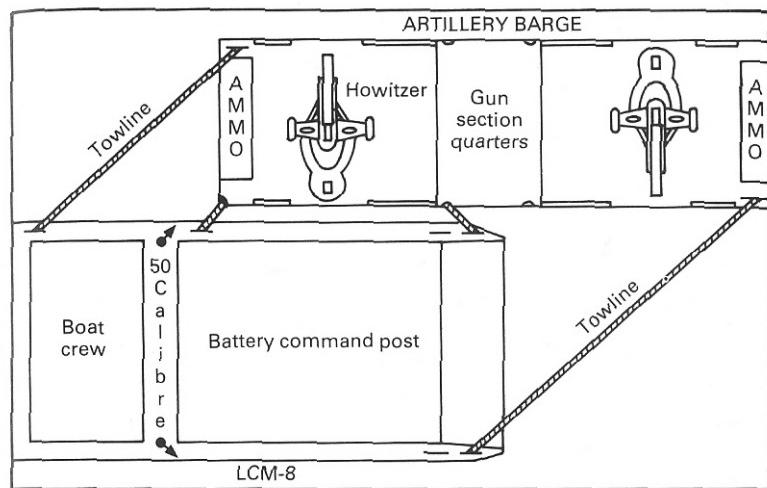
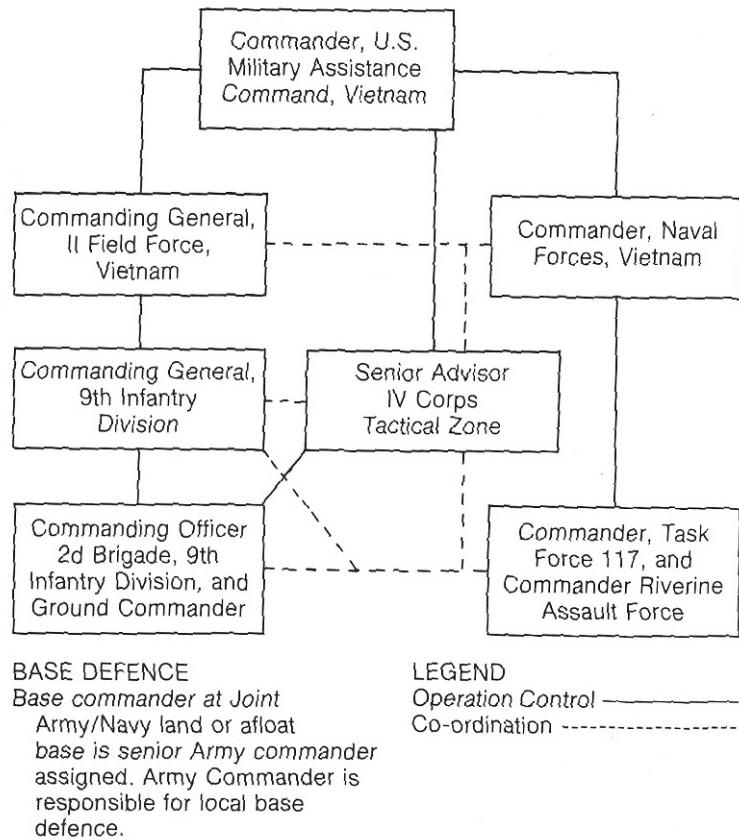
CONCLUSION

As the U.S. military continues to pursue the GWOT, and other tasks such as counter-drug operations, it will continually find itself fighting in areas with limited infrastructure and access, such as rivers and their deltas, island chains, and coastal zones. The technological overmatch enjoyed by U.S. forces will drive its enemies to fight asymmetrically in these areas, which leaves a capability gap for the combatant commander. Roles such as riverine troop transport, fire support, patrolling, and waterway interdiction, fill that gap. Although U.S. riverine history has many examples, the Vietnam example is the most relevant. The United States Navy should develop and maintain a robust riverine capability. The starting point for analysis of desired capabilities should be the Mobile Riverine Force of MACV.

Each component of the MRF should be addressed during the development of this force in the conventional Navy, but the way ahead is clear. The Navy must build and maintain this force in order for the regional combatant commanders to control a vital part of their areas of responsibility. The joint community must actively support the creation and implementation of this force. In the GWOT, and future conflicts, the U.S. military must be able to dominate this vital part of the battlespace.

Appendix A³⁴

MOBILE RIVERINE FORCE COMMAND STRUCTURE



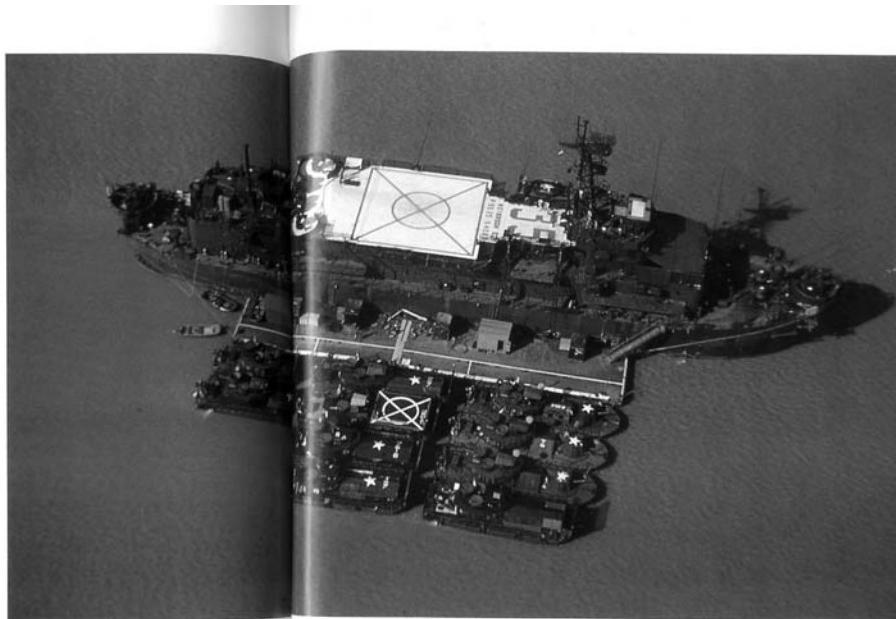
The artillery barge was a further US measure to overcome the difficulty of moving troops and firepower overland.

³⁴ Barry Gregory, *Vietnam Coastal and Riverine Forces Handbook* (Wellingborough, England, Patrick Stephens Limited, 1988), 14, 121, 102-103, 111, 104, 115.

Right The USS Benewah (APB 35) moored in the Soi Rap River in the Rung Sat Special Zone with her assault ships alongside.

Bottom right A PBR at work alongside a Vietnamese sampan during a stop and search operation in the Perfume River, 1969.

Below River patrol boats (PBR) at work on patrol along the Mekong River



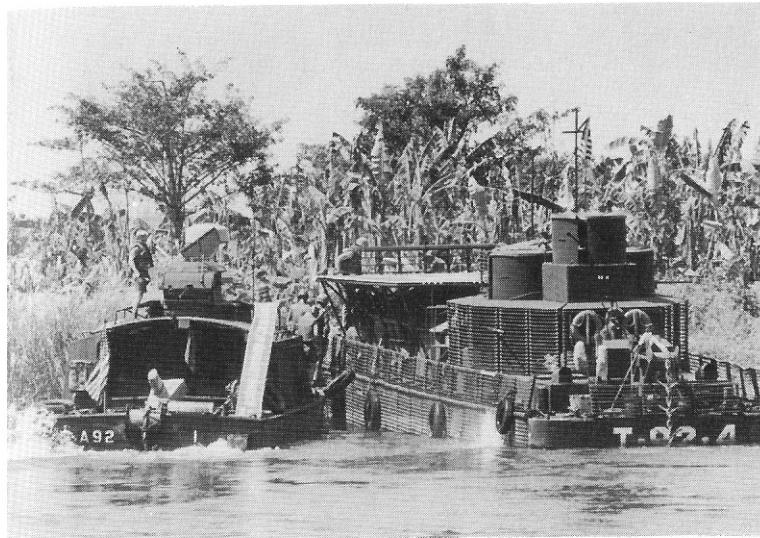
Above: *USS Benewah*, one of the MRF floating bases.

A command and control boat (CCR) constructed under Programme V.





Above: A monitor uses its water cannon on a bunker.



Above An ASPB and an ATC insert along a canal bank during a patrol.

Below An ASPB and PBRs move up the Rach Thom/Rach Mo canal system during an operation not far from Saigon.

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